

IN THE SPECIFICATION:

Please amend the paragraph at page 20, lines 5-16 to reflect the following changes:

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Fig. 5 is a flow diagram of the preferred steps 500 corresponding to the loop-back detection feature of the present invention. In particular, as indicated at block 510, the enhanced spanning tree entity 316 generates BPDU messages 100 for transmission from one or more ports 310 in accordance with the conventional spanning tree protocol. Next, the enhanced spanning tree entity 316 generates a loop-back data structure ~~318~~ 319 (Fig. 3) comprising copies of at least the bridge identifier (ID) field 116 and the port identifier (ID) field 118 from the BPDU message 100 forwarded from each port 310a-310e, as indicated at block 512. That is, a loop-back detection data structure ~~318~~ 319 is preferably generated for each port 310 through which a corresponding BPDU message 100 is transmitted. The loop-back data structure ~~318~~ 319, which may be the same BPDU data structure stored for the respective port or a separate structure, is preferably stored at the spanning tree memory 320.

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Please amend the paragraph at page 20, line 17 to page 21, line 18 to reflect the following changes:

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Next, as BPDU messages 100 are received at one or more ports 310a-e, information is extracted therefrom by the extractor module 322 of the enhanced spanning tree entity 316, as shown at block 514. Preferably, extractor module 322 extracts at least the contents of the bridge ID field 116 and the port ID field 118 from the received BPDU message 100. This extracted information is then compared by the enhanced spanning tree entity 316 with the corresponding loop-back data structure ~~318~~ 319, as indicated at block 516. More specifically, the entity 316 includes one or more comparator modules that compares the bridge ID field 116 and the port ID field 118 from the received BPDU message 100 with the corresponding fields of the respective loop-back detection data structure ~~318~~319, which, as described above, was derived from the BPDU message forwarded from that port. If the enhanced spanning tree entity 316 detects a match between the extracted information and the corresponding loop-back detection data structure ~~318~~319 (i.e., both the bridge ID and the port ID from the received BPDU message are the same as the bridge ID and port ID fields 116, 118 from the corresponding loop-back detection data structure ~~318~~ 319), as indicated at block 518, entity 316 directs state machine engine 324 to transition the respective port to the blocking state. With the port in the blocking state, switch 222 neither forwards data frames to or from the port. If a match is not detected between the extracted information and the corresponding loop-back detection data structure ~~318~~319 (e.g., either the bridge ID or the port ID of the received BPDU message 100 differ from those data elements contained in the corresponding loop-back data structure ~~318~~ 319), then the enhanced spanning tree entity 316 simply processes the contents of the received BPDU message 100, as indicated at block 520, and modifies the respective port state in accordance with the conventional spanning tree protocol, as indicated at block 522. For example, the received BPDU message 100 may be compared with the “best” information currently known by entity 316.

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Please amend the paragraph at page 22, lines 3-14 to reflect the following changes:

It should be understood that the loop-back detection data structure ~~318-319~~ may include additional data elements from the transmitted BPDU message, besides the bridge ID field 116 and port ID field 118, and these additional elements may also be used for subsequent comparison. For example, loop-back detection data structure ~~318-319~~ may include, and spanning tree entity 316 may also consider, the root ID field 112, the root path cost field 114, and/or any of fields 120-126 from the BPDU message sent from a given port 310. It should further be understood that, if the transition of a loop-back port results in a loss of connectivity to some portion of the network 200, the network administrator should be notified in order to correct the situation. In the preferred embodiment, the loop-back detection method 500 is preferably implemented in software as a series of steps executed by the enhanced spanning tree entity 316, although a hardware solution could also be implemented.
